


Notice of Allowability	Application No.	Applicant(s)	
	10/028,238	ODA ET AL.	
	Examiner	Art Unit	
Jessica T Stultz	2873		

-- **The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**
All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment dated 4/22/04.
2. ☒ The allowed claim(s) is/are 2,5-7,12,14 and 21.
3. ☒ The drawings filed on 21 December 2001 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

Art Unit: 2873

Allowed Claims: 2, 5-7, 12, 14, and 21

Reasons For Allowance

The following is an examiner's statement of reasons for allowance: none of the prior art alone or in combination disclose or teach of the claimed combination of limitations to warrant a rejection under 35 USC 102 or 103.

Specifically regarding claim 2, none of the prior art alone or in combination disclose or teach of the claimed optical path control apparatus as is disclosed above wherein the driving means is an ultrasonic wave generating source, and specifically wherein said second substrate is moved by progressive waves generated by said ultrasonic wave generating source and is located on a position by standing waves and said first optical path is optically connected to said second optical path associated with said position.

Specifically regarding claim 5, none of the prior art alone or in combination disclose or teach of the claimed optical path control apparatus as is disclosed above specifically wherein the second substrate has a gear shape wherein the driving section has an electrostatic actuator and rotates said second substrate based on force generated by said electrostatic actuator such that said mirror section is rotated, or that first optical path is optically connected to said second optical path associated with a rotation angle of said mirror section.

Specifically regarding claim 6, none of the prior art alone or in combination disclose or teach of the claimed optical path control apparatus as is disclosed above specifically wherein the second substrate has a micro-light wheel, the driving section has lasers, and the second substrate rotates based on laser beams emitted by said lasers, and said first optical path is optically connected to said second optical path associated with a rotation angle of said mirror section.

Specifically regarding claim 7, none of the prior art alone or in combination disclose or teach of the claimed optical path control apparatus as is disclosed above specifically wherein the second substrate is provided a concave section of the first substrate, wherein the concave section is filled with fluid; further wherein said driving section moves the second substrate by supplying the fluid from one end of the concave section and absorbing fluid from another end of the concave section, said mirror section reflects said input light based on the movement of the second substrate so that the first optical path is optically connected to the second optical path.

Specifically regarding claim 12, none of the prior art alone or in combination disclose or teach of the claimed optical path control apparatus as is disclosed above wherein the mirror section comprises: a mirror layer provided as a surface layer; and specifically a layer changing its shape in response to the input signal, an electrode layer provided under the layer changing its shape, wherein the mirror portion is transformed through transformation of the layer changing its shape in response to supply of the input signal such that a reflection angle of the mirror section is changed.

Specifically regarding claim 14, none of the prior art alone or in combination disclose or teach of the claimed optical path control apparatus as is disclosed above wherein the said mirror section comprises: a mirror layer provided as a surface layer; specifically a shape memory layer provided under said mirror layer, and a heating layer provided under said shape memory layer; wherein said mirror layer of said mirror section is transformed due to transformation of said shape memory layer through heating by said heating layer in response to said input signal such that a reflection angle of said mirror section is changed.

Specifically regarding claim 21, none of the prior art alone or in combination disclose or teach of the claimed optical path control apparatus as is disclosed above specifically wherein a mirror section is provided on a surface of the first substrate having a reflective surface with an angle larger than zero with respect to a surface of the first substrate.

Conclusion

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jessica T Stultz whose telephone number is (571) 272-2339. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps can be reached on 571-272-2328. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

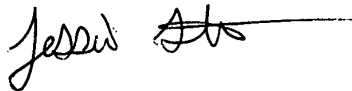

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Jessica Stultz
Patent Examiner
AU 2873
May 3, 2004

Handwritten signature of Jessica Stultz in black ink.Handwritten signature of Jordan Schwartz in black ink.

JORDAN SCHWARTZ
PRIMARY EXAMINER